PT-AIR-NPT

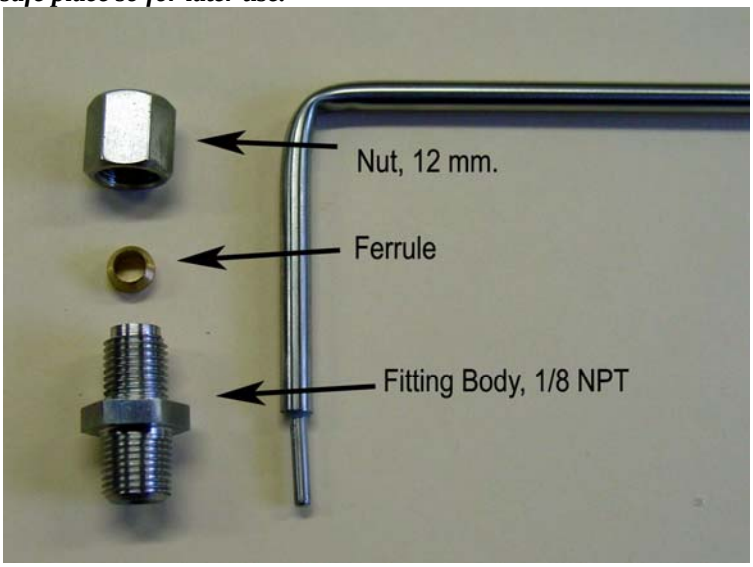
Air Intake Sensor Installation Manual

Version 1.1, Sept 2011

A. MOUNTING THE SENSOR

1) Locate the sensor location point on the duct. Consult your dealer or manufacture for their suggested location.
2) Once the spot is located, drill and tap a hole with 1/8 NPT thread.
3) Use a small mechanics magnet that will pass through the hole to the bottom wall to retrieve drill and tap shavings. Clean shavings from magnet and search for more shavings until the magnet comes back clean.
4) With the sensor inserted through the untightened fitting, measure the sensors immersion depth into the air intake duct. The correct immersion should be 1/3 to ½ the diameter of the pipe. This immersion will not cause a significant restriction in flow. When the depth has been selected, mark the sensor at the location just above the compression nut with a marker or pencil. Now remove the senor from the mounting hardware.
5) Install the mounting adaptor to the drilled hole. Tighten it with a 14 mm (or 9/16") wrench.
6) Insert the sensor through the mounting hardware until the depth mark reaches the top of the compression nut.
7) With the sensor transition spring lead wire at the 90 degree angle from the pipe and using a short 12 mm (or 1/2") open end wrench, tighten the compression nut until the sensor probe is unable to rotate in the hardware. If necessary, support the square portion of the fitting body with a 14 mm open end wrench.
8) Route the lead wire toward the firewall taking precaution to keep it away from hot and moving parts. Do not harness the lead wire tightly. Make long sweeping bends and loosely guide the lead wire to the instrument using the harness ties. This will allow the wire to absorb the engine vibration along the wires length,

NOTE: The cable of this RTD sensor is made of copper wire. If the wire is too short for the application, you can extend it with three conductor copper wire. When disassembling the sensor, place the ferrule(olive) in a safe place so for later use.



B. WIRING THE SENOSR AND SET UP THE METER

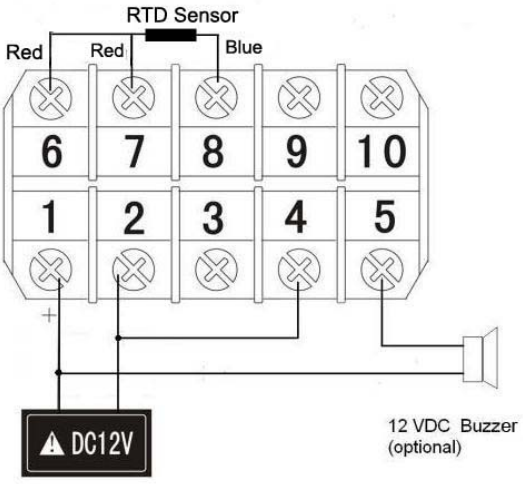


Fig 1. Wiring diagram

1) The input is configured for K type thermocouple. You need to change the input configuration to PT100 RTD sensor before using it. To do that, Press SET, enter code 0089. Press SET again to get in the parameter setting mode, It will display Inty. Press SET again, then, use ^ key until you see P100. Press SET again. Press ^ until display show END. Press SET again. The detail can be found in section C1 of the instruction manual.
2) To operated it, connect 12 VDC to terminal 1 (+) and 2 (-). Connect the RTD sensor, The sensor has three wires. Connect the reds to terminal 6 and 7, and blue to 8 as shown in Fig. 1
3) The alarm is at 900 F. The AL LED will be on above that temperature. It will be off when temperature drops to below 800 F. To change the alarm, use code 0001 to change AH1 and AL1 setting. The detail can be found in section C 2 of the instruction manual.
4) The temperature display unit is for Fahrenheit. To change it to Celsius, use code 89 to change CorF setting. When temperature change from F to C, the alarm temperature needs reset to the corresponding value. The detail can be found in section C1 of the instruction manual.
5) The peak holding function is set for display the Maximum temperature. To display the peak temperature from the last run, or display the temperature in the peak holding mode continuously, press the “>” key once. The MAX (MIN) LED will be on, indicating the display is in the peak mode. Press “>” again to change back to display the current temperature. Press and hold “Λ” for 3 second will reset the memory. Three additional peak parameters have been turned off for this meter. They are, the time that the maximum temperature was recorded, the minimum temperature and its recording time. If you want see them, use code 0037 to turn on these functions. The detail can be found in section C3 of the instruction manual.
6) Error message. If the meter displays “EEEE”, it indicates the sensor is not connected correctly or is faulty.